

WHAT IS CLAIMED IS:

1. A plasma display panel comprising:
  - a front substrate;
  - a plurality of row electrode pairs provided on the inner surface of the front substrate, said row electrode pairs being arranged in parallel with one another and extending in the row direction of the panel, with each row electrode pair forming a displaying line;
  - a dielectric layer provided on the inner surface of the front substrate for covering the row electrode pairs;
  - a rear substrate arranged in parallel with and space-apart from the front substrate, forming a discharge space therebetween;
  - a plurality of column electrodes provided on the inner surface of the rear substrate, said column electrodes being arranged in parallel with one another and extending in the column direction of the panel, in a manner such that at each intersection of a row electrode pair with a column electrode there is formed a light emission unit;
  - a partition wall assembly provided between the front substrate and the rear substrate, said partition wall assembly including a plurality of longitudinal partition walls and a plurality of lateral partition walls, thereby dividing the discharge space into a plurality of discharge cells;
  - wherein the dielectric layer has a plurality of

projection portions located corresponding to and protruding toward the lateral partition walls of the partition wall assembly, in a manner such that there would be no slots formed between the dielectric layer and the lateral partition walls.

2. The plasma display panel according to claim 1, wherein a slot is formed between the dielectric layer and each longitudinal partition wall of the partition wall assembly.

3. The plasma display panel according to claim 1, wherein a fluorescent layer is formed to cover side faces of the longitudinal partition walls and the lateral partition walls and exposed portions of another dielectric layer formed on the inner surface of the rear substrate.

4. The plasma display panel according to claim 1, wherein the partition wall assembly has a two-layer structure, one of which is a light absorbing layer located closer to the front substrate, and the other of which is a light reflecting layer located closer to the rear substrate. -

5. The plasma display panel according to claim 1, wherein each row electrode pair has two row electrodes each having a light absorbing layer facing the front substrate.

6. The plasma display panel according to claim 5, wherein

each of the two row electrodes forming one electrode pair has a plurality of protruding portions, forming a plurality of discharge gaps between mutually facing protruding portions of the two row electrodes.

7. The plasma display panel according to claim 1, wherein a mutual positional relationship between two row electrodes of a row electrode pair is alternatively changed from one displaying line to another, two mutually adjacent row electrodes of every two mutually adjacent displaying lines are connected to an identical common electrode main body.

8. The plasma display panel according to claim 6, wherein protruding portions of two mutually adjacent row electrodes of every two mutually adjacent displaying lines are connected with each other.

9. The plasma display panel according to claim 1, wherein there are formed a plurality of lateral light absorbing straps on the inner surface of the front substrate, with each-lateral light absorbing strap being positioned between two mutually adjacent row electrodes of every two mutually adjacent displaying lines.

10. The plasma display panel according to claim 1, wherein there are formed a plurality of longitudinal light absorbing

straps on the inner surface of the front substrate, with each longitudinal light absorbing strap being positioned corresponding to one longitudinal partition wall.

11. The plasma display panel according to claim 1, wherein a light absorbing layer is formed on the inner surface of the front substrate layer, said light absorbing layer having the same pattern corresponding to the lateral and longitudinal partition walls of the partition wall assembly.

12. The plasma display panel according to claim 1, wherein protruding portions of two row electrodes forming one displaying line have mutually facing head portions which are inclined with respect to the row direction of the panel.

13. The plasma display panel according to claim 1, wherein each displaying line includes a plurality of discharge cells repeatedly arranged in the order of R, G, B, each column includes a plurality of same color discharge cells, with every three discharge cells (R, G, B) arranged in a displaying line forming one picture element.

14. The plasma display panel according to claim 1, wherein each displaying line includes a plurality of discharge cells repeatedly arranged in the order of R, G, B, one displaying line being deviated in the row direction from its adjacent

displaying line by one discharge cell, with every three discharge cells (R, G, B) arranged in a display line forming one picture element.

15. The plasma display panel according to claim 1, wherein each displaying line includes a plurality of discharge cells repeatedly arranged in the order of R, G, B, one displaying line being deviated in the row direction from its adjacent displaying line by half width of one discharge cell, with every three discharge cells (R, G, B) arranged in a display line forming one picture element.

16. The plasma display panel according to claim 1, wherein each displaying line includes a plurality of discharge cells repeatedly arranged in the order of R, G, B, one displaying line being deviated in the row direction from its adjacent displaying line by 1.5 times the width of one discharge cell, in a manner such that each pitch element may also be formed by three discharge cells (R, G, B) which together form a triangular configuration bridging over two mutually adjacent displaying lines.

17. The plasma display panel according to claim 1, wherein each lateral partition wall of the partition wall assembly is divided into two portions by an elongated slot extending in the row direction of the panel.

18. The plasma display panel according to claim 17, wherein each divided portion of each lateral partition wall has substantially the same width as that of each longitudinal partition wall of the partition wall assembly.

19. The plasma display panel according to claim 17, wherein a plurality of light absorbing straps are formed on the inner surface of the front substrate, in positions corresponding to the elongated slots.

20. The plasma display panel according to claim 17, wherein a plurality of light absorbing straps are formed on the inner surface of the front substrate, in positions corresponding to the longitudinal partition walls of the partition wall assembly.

21. The plasma display panel according to claim 17, wherein at least the longitudinal partition walls of the partition wall assembly have a two-layer structure, one of which is a light absorbing layer facing toward the front substrate, and the other of which is a light reflecting layer facing toward the rear substrate.

22. The plasma display panel according to claim 1, wherein each of two row electrodes of a row electrode pair includes an

elongated main body portion extending in the row direction of the panel and a plurality of protruding portions extending in the column direction of the panel, so that a plurality of discharge gaps are formed between mutually facing protruding portions of two elongated main body portions,

wherein each elongated main body portion is made by a metal film;

wherein each protruding portion is formed by a transparent electrically conductive film, with its base end connected to an elongated main body portion.

23. The plasma display panel according to claim 22, wherein a light absorbing layer is formed on each elongated main body portion so that said light absorbing layer is interposed between the inner surface of the front substrate and the elongated main body portion.

24. The plasma display panel according to claim 22, wherein one elongated main body portion is shared by two mutually adjacent row electrodes of two mutually adjacent displaying lines.

25. The plasma display panel according to claim 17, wherein the outermost corner portions of each lateral partition wall are removed so as to form inclined surfaces thereon.

26. The plasma display panel according to claim 1 or 17, wherein outer end portions of partition wall assembly are formed in positions not facing the projection portions of the dielectric layer.

27. The plasma display panel according to claim 26, wherein outer end portions of each pair of lateral partition walls are combined with each other in positions not facing the projection portions of the dielectric layer.

28. The plasma display panel according to claim 1, wherein the partition wall assembly is made of a light transmissible material.

29. A plasma display panel comprising:

- a front substrate;
- a plurality of row electrode pairs provided on the inner surface of the front substrate, said row electrode pairs being arranged in parallel with one another and extending in the row direction of the panel, with each row electrode pair forming a displaying line;
- a dielectric layer provided on the inner surface of the front substrate for covering the row electrode pairs;
- a rear substrate arranged in parallel with and spaced apart from the front substrate, forming a discharge space therebetween;